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Experiences with prenatal care, among Kansas women who had a live birth in 2017

Introduction

Receiving prenatal care early in a pregnancy is fundamental for ensuring a healthy pregnancy. Not only do prenatal care appointments allow medical providers to screen for and manage health issues, but they also give expectant mothers the opportunity to ask about any concerns that they may have, such as healthy weight gain during pregnancy, or how to care for a newborn. The Healthy People 2020 goal for prenatal care is to increase the nationwide percent of women who receive prenatal care in the first trimester to 77.9%.

This report discusses the experiences that Kansas women had with prenatal care, prior to giving birth to a live infant in 2017.

Methods

Data from the 2017 cycle of the Kansas Pregnancy Risk Assessment Monitoring System (PRAMS) were used for this report. PRAMS is an ongoing, population-based survey of women who have recently given birth. Each month, Kansas women who had a live birth 2-3 months previously are randomly selected from birth certificate files. These women are invited to complete the PRAMS questionnaire. After data collection has been conducted for a given year, the survey data from that year are weighted to adjust for the sampling design, non-response, and non-coverage.

For this report, we assessed questionnaire items related to prenatal care, including: receipt of prenatal care during the first trimester; receipt of prenatal care as early as desired; reasons for not getting prenatal care when desired; the most common source from which mothers received prenatal care; and interactions with healthcare workers during prenatal care visits. Prevalence estimates and 95% confidence intervals (CI) were calculated. All analyses were performed using procedures which account for complex survey design, in SAS version 9.4 with SUDAAN version 11.0.

Results

Among women who had a live birth in 2017, 85.7% reported receiving prenatal care during the first trimester (Table 1). Prenatal care rates differed across demographic groups. Hispanic mothers had a

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lower rate of receiving prenatal care during the first trimester, compared to Non-Hispanic White mothers. Unmarried women also had a lower rate compared to married women. In addition, women with higher household income had a higher rate of receiving prenatal care than women with lower income.

Table 1. Proportion of women who received prenatal care during the first trimester – Kansas PRAMS, 2017

Category	Total Respondents	Unweighted Frequency	Weighted Frequency	Weighted %	95% CI
All respondents	981	862	29181	85.7	82.4 - 88.5
Maternal race/ethnicity					
Non-Hispanic White	738	668	22414	89.7	86.4 - 92.3
Non-Hispanic Black	72	59	1754	80.9	64.3 - 90.9
Hispanic	95	70	3173	67.3	53.7 - 78.5
Other[a]	76	65	1839	84.3	70.5 - 92.4
Maternal age					
Less than 20 years	48	34	1200	61.1	41.6 - 77.6
20-24 years	198	164	6824	84.0	76.0 - 89.7
25-34 years	591	536	17228	89.4	85.4 - 92.4
35 years or older	144	128	3929	84.0	73.5 - 90.8
Marital status					
Married	670	614	20748	90.9	87.4 - 93.4
Other	311	248	8432	75.2	67.9 - 81.4
Federal poverty level[b]					
Less than 100%	273	217	7530	76.3	68.2 - 82.9
100% to 199%	238	202	7277	83.1	76.4 - 88.2
200% to 399%	213	203	6793	93.5	87.5 - 96.7
400% or greater	208	202	6532	99.0	96.0 - 99.7

All demographic variables except poverty level have been derived from infants' birth certificates.
a Includes Non-Hispanic Asian, Native American, Native Hawaiian/Pacific Islander, and multiracial.
b Calculated from responses to questions about household income and household size. Based on poverty thresholds established by the Census Bureau for the year 2016.
Source: Kansas Pregnancy Risk Assessment Monitoring System (PRAMS), 2017

Among those who had prenatal care, more than 1 in 8 women (13.4%) did not start their prenatal care as early as they wished (95% CI: 10.8% to 16.5%). The most commonly reported barrier was being unaware of pregnancy (Table 2). In addition, 2 in 5 women (40.0%) who did not get prenatal care, or who did not get care as early as they wished, reported that they could not schedule an appointment for their desired time. 1 in 4 women (25.4%) reported that they did not have enough money or insurance to cover a visit.

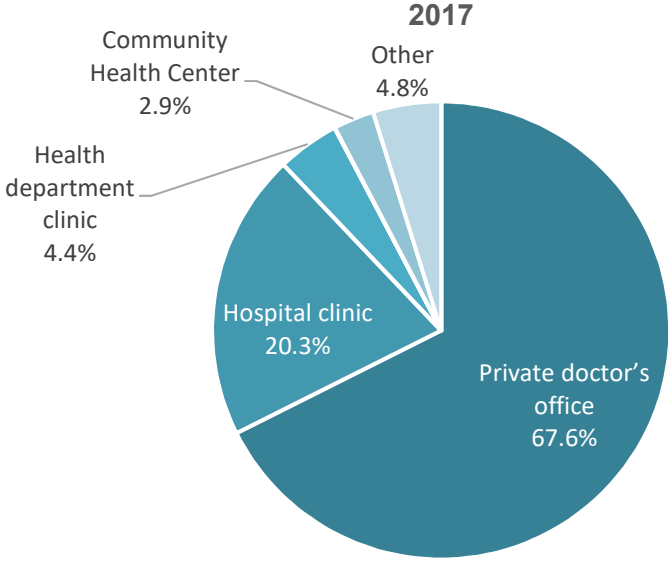
Table 2. Barriers to receiving prenatal care, among women who did not get prenatal care, or not as early as desired – Kansas PRAMS, 2017

Barriers	Unweighted Frequency	Weighted Frequency	Weighted %	95% CI
Could not get appointment at desired time	52	1738	40.0	29.3 - 51.8
Did not have enough money or insurance	37	1068	25.4	16.5 - 36.9
Did not have transportation*	15	317	7.7	3.5 - 16.0
Doctor or health plan would not start care as early as desired	44	1395	31.6	22.1 - 43.0
Too busy	26	858	21.1	13.0 - 32.3
Could not take time off from work or school*	9	207	5.0	1.9 - 12.8
Did not have Medicaid/KanCare card	29	938	22.3	13.8 - 34.1
Did not have child care*	13	402	9.7	4.8 - 18.8
Did not know she was pregnant	52	1814	40.1	29.4 - 52.0
Wanted to keep pregnancy secret*	12	401	9.7	4.6 - 19.5
Did not want prenatal care	--	--	--	--

* This percentage may be statistically unreliable (Relative Standard Error > 30%). Interpret with caution.
Two hyphens (i.e., --) indicate suppressed data due to insufficient sample size.
Source: Kansas Pregnancy Risk Assessment Monitoring System (PRAMS), 2017

Among those who received prenatal care, most received their care at private doctors' offices (Figure 1). 1 in 5 women (20.3%) reported hospital clinics as their most frequented source of care.

Figure 1. Primary source of prenatal care, among women who received prenatal care -- Kansas PRAMS, 2017



Source: Kansas Pregnancy Risk Assessment Monitoring System (PRAMS), 2017

During prenatal care visits, healthcare workers discussed a variety of topics with expectant mothers (Table 3). Most women reported having talked about their plans to breastfeed. In addition, more than 9 in 10 women were asked about use of prescription medications, tobacco, and/or alcohol. About 4 in 5 women (79.7%) were asked about use of other drugs. Meanwhile,

approximately 3 in 5 women (59.2%) had discussed how much weight they should gain during pregnancy. 7 in 10 women (69.9%) were asked by a healthcare worker if they were being hurt emotionally or physically by a partner. Only half of women (50.6%) were asked if they wished to be tested for HIV.

Table 3. Topics discussed during prenatal care visits, among women who received prenatal care -- Kansas PRAMS, 2017

Topics	Unweighted Frequency	Weighted Frequency	Weighted %	95% CI
Optimum weight gain during pregnancy	583	20042	59.2	55.1 - 63.1
Use of prescription medications	961	33512	98.6	97.2 - 99.3
Cigarette smoking	938	32242	94.8	92.6 - 96.4
Alcohol use	927	31845	93.8	91.5 - 95.5
Physical or emotional abuse	673	23497	69.9	66.1 - 73.4
Feeling down or depressed	754	25670	75.9	72.3 - 79.2
Drug use (i.e., marijuana, cocaine)	780	26838	79.7	76.4 - 82.8
Desire to be tested for HIV	495	16884	50.6	46.6 - 54.7
Plans to breastfeed new infant	902	31355	92.6	90.3 - 94.5
Plans to use birth control after delivery	753	26620	78.8	75.4 - 81.8

Source: Kansas Pregnancy Risk Assessment Monitoring System (PRAMS), 2017

Discussion

There are areas for improvement in prenatal care in Kansas. More than 1 in 10 women who gave birth in 2017 did not start care during the first trimester. In addition, among those who received prenatal care, many did not discuss key topics with a healthcare worker, such as depression or abuse. These findings reveal potential gaps for programs or policy to alleviate. Future cycles of PRAMS data will increase our understanding of barriers to accessing prenatal care in Kansas.

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Palliative Care among Kansas Adults

Background

For Kansans facing serious or life-threatening illness, whole person compassionate care is an essential component of treatment. According to the World Health Organization (WHO), “Palliative care is an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual” [1]. The Center to Advance Palliative Care estimates that palliative care is needed by six million Americans [2].

Palliative care is often associated with patients with cardiovascular diseases, cancer, and other life-threatening illnesses. In 2016, about 53 percent of Kansas adults aged 18 years and older had one or more of the following chronic diseases: myocardial infarction, coronary heart disease, stroke, asthma, any type of cancer, COPD, arthritis, depression, kidney diseases, and diabetes [3]. The large percentage of Kansas adults with chronic illnesses underscores the need for medical and public health professionals to address the physical and psychosocial well-being of patients with chronic diseases.

Palliative care is recognized as an emerging issue in Healthy People 2020, Access to Health Services, which calls for increasing and measuring access to palliative care services [4]. Collecting data about the receipt of palliative care services among Kansas adults with chronic illnesses is important to inform strategies and assess progress towards the Kansas Cancer Prevention and Control Plan's goal to increase access to palliative care services during and after treatment, as well as the Kansas Chronic Disease State Plan's goal to increase the number of practicing palliative care physicians.

This report presents demographic and diagnostic characteristics among Kansas adults age 18 years and older who had received palliative care to manage both physical and psychological consequences of serious and chronic illnesses.

Methods

The Kansas Behavioral Risk Factor Surveillance System (KS BRFSS) is a random digit-dial population-based survey of non-institutionalized adults 18 years and older living in private

residences and college housings with landline and/or cell phone service in Kansas. In 2016, a palliative care module was included in the KS BRFSS for the first time. Data from the 2016 Kansas BRFSS were analyzed to estimate the prevalence of receiving palliative care overall and by subpopulation groups. Palliative care was defined as medical care provided by a team of doctors, nurses, social workers and other health care providers to help relieve pain, stress and other symptoms due to a serious and chronic illness.

Among adults who had received palliative care, respondents were asked to identify the illness for which they had received palliative care, whether they had experienced stress, depression, or problems with emotions from the illness, whether they had experienced physical pain and whether they received treatment to manage their pain. Adults who had received palliative care were also asked to rate the following services provided by the palliative care team: emotional support, information to manage pain among those who experienced pain, and information to manage stress and depression, and problems with emotions among those who experienced these problems. Responses to the rating questions were on a four-point scale: excellent, good, fair or poor. A satisfied rating was defined as responses of excellent or good.

Prevalence estimates and 95 percent confidence intervals (95% CI) were calculated using weighted survey data analysis procedures in SAS 9.4. Statistically significant differences in prevalence estimates across subpopulation groups were indicated by non-overlapping 95% confidence intervals. Survey logistic regression analysis was used

to assess the association between receiving palliative care and insurance status, living with disability and history of any chronic disease while controlling for gender and age. History of any chronic disease was defined as having any of the following diseases: myocardial infarction, coronary heart disease, stroke, asthma, any type of cancer, COPD, arthritis, depression, kidney diseases, and diabetes.

Results

Receiving Palliative Care among Kansas Adults

In 2016, an estimated 72,347 (3.3%) Kansas adults aged 18 years and older had received what they interpreted as palliative care for chronic illnesses. This percentage was higher among Kansas adults who reported history of any chronic disease compared to those who did not report history of chronic diseases (5.6% [95% CI 4.7-6.5] versus 0.7% [95% CI 0.1-1.3]). Kansas adults received palliative care for the following diseases: back related conditions (16.4%), cancer (11.8%); chronic heart diseases (10.5%); respiratory diseases (8.9%); mental health problems (7.6%); and arthritis (7.3%) (Table 1). Other diseases included: care after surgery and fractures, gastrointestinal diseases, gallbladder diseases, diabetes/diabetes related conditions, traumatic brain injury (TBI)/neurological illness, infections, autoimmune disorders, kidney and liver diseases, obesity, hemophilia, allergic reactions, chronic inflammatory demyelinating polyneuropathy (CIDP), pregnancy, blindness, Meniere's disease, nerve pain, paralysis, blood transfusion, burn, premature birth, limb loss, rheumatic fever and sleep apnea.

Table1: Most Common Chronic Illnesses for Which Kansas Adults Reported Receiving Palliative Care, KS BRFSS 2016

Illness	Percent among KS Adults Who Received Palliative Care	95% CI
Back related	16.4	10.1-22.7
Cancer	11.8	6.9-16.8
Heart diseases*	10.5	6.0-15.0
Respiratory diseases**	8.9	4.9-12.9
Mental illness	7.6	3.0-12.2
Arthritis	7.3	3.1-11.4

*Heart diseases include congestive heart failure and stroke.
**Respiratory diseases include COPD and pulmonary diseases.
Source: 2016 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE

Demographic Characteristics of Kansas adults who had received palliative care

Table 2 shows the prevalence of having received palliative care among Kansas adults aged 18 years and older by sociodemographic characteristics. The prevalence of having received palliative care was significantly higher among older adults (45 years and older) compared with younger adults (18-44 years). In addition, the prevalence of having received palliative care was higher among Kansas adults with lower household income and among adults living with disability compared with higher household income and living without disability. The percentage of adults who had received palliative care did not differ based on gender, education level, insurance status, or county population density.

The outcomes of the survey logistic regression analysis showed that the significant factors associated with receiving palliative care were living with disability (POR = 4.0, 95% CI:2.7-6.1), household income less than $25,000 (POR = 2.1, 95% CI:1.2-3.5) and the history of one or more of chronic diseases (POR = 5.3, 95% CI:2.2-12.7) (Table 3).

Table 2: Percentage of Palliative Care Recipients Aged 18 Years and Older by Sociodemographic Groups, KS BRFSS 2016

Demographic Groups	Weighted percent	95 % CI
Overall	3.3	2.8-3.9
Gender		
Male	3.2	2.4-4.1
Female	3.4	2.7-4.1
Age Groups		
18-44 years	2.2	1.4-2.9
45-64 years	4.1	3.0-5.1
65+ years	4.9	3.8-6.0
Education		
Less than high school	5.1	2.3-7.9
High school or GED	3.8	2.7-4.9
Some college	3.2	2.3-4.1
College graduate	2.5	1.7-3.3
Annual Household Income		
Less than $25,000	6.8	4.9-8.6
$25,000 to less than $50,000	3.4	2.4-4.5
$50,000 and more	1.9	1.2-2.5
Disability Status		
Living with a disability	9.7	7.9-11.5
No disability	1.3	0.9-1.8
Insurance		
Uninsured	2.8	1.1-4.1
Insured	3.4	2.8-4.0
Population Density		
Rural	3.9	2.9-4.9
Urban	3.1	2.4-3.7
+1 Chronic Diseases*		
Yes	5.6	4.7-6.5
No	0.7	0.1-1.3

* chronic diseases included: myocardial infarction, coronary heart disease, stroke, asthma, any type of cancer, COPD, arthritis, depression, kidney diseases, and diabetes
Source: 2016 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE

Table 3. Adjusted Odds Ratios for Receipt of Palliative Care among Kansas Adults, KS BRFSS 2016		
Factor		Adjusted Prevalence Odds Ratio (POR) (95% CI)
History of chronic diseases*	No	-
	Yes	5.3 (2.2-12.7)
Annual Household income	≥ $50,000	-
	$25,000 - <$50,000	1.3 (0.8-2.2)
	< $25,000	2.1 (1.2-3.5)
Living with disability	No	-
	Yes	4.0 (2.7-6.1)
Age	18-44 years	-
	45-64 years	1.2 (0.7-1.9)
	> 65 years	1.0 (0.6-1.6)
Gender	Male	-
	Female	1.0 (0.7-1.5)
Source: 2016 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE * chronic diseases included: myocardial infarction, coronary heart disease, stroke, asthma, any type of cancer, COPD, arthritis, depression, kidney diseases, and diabetes		

Pain management among Kansas adults who had received palliative care

Almost three fourths (72.0%) of Kansas adults 18 years and older who had received palliative care experienced physical pain caused by their illness or its treatment. Among those who experienced pain, the majority (84.8%) were satisfied by the information they were given to manage pain from the palliative care team and almost all (95.1%) were prescribed medication to control pain.

Management of stress, depression, or emotional problems among Kansas adults who had received palliative care

About 57.2 percent of Kansas adults who had received palliative care experienced stress, depression, or problems with emotions caused by their illness or its treatment. Among those who experienced stress, depression, or emotional problems about 80.1 percent were satisfied by the information they have been given to manage these psychological illnesses. In addition, among all Kansas adults who had received palliative care, about 82.1 percent were satisfied by the emotional support that have been provided by palliative care team.

Discussion

This is the first time that the State of Kansas included questions in its BRFSS to collect information about the palliative care services received by Kansas adults age 18 years and older. Kansas adults who have received palliative care were satisfied by the services provided by palliative care teams, however, the prevalence of receiving palliative care is low. Only 5.6% of Kansas adults with history of chronic disease (myocardial infarction, coronary heart disease, stroke, asthma, any type of cancer, COPD, arthritis, depression, kidney diseases, and diabetes) had received palliative care. To promote providing the palliative care services to Kansas adults with chronic conditions, Kansas House passed a bill in January 2018 to create the Palliative Care and Quality of Life Interdisciplinary Advisory Council and the State Palliative Care

Consumer and Professional Information and Education Program within the Kansas Department of Health and Environment (KDHE) [5].

The information from the 2016 KS BRFSS are important for the Kansas Palliative Care Program to understand the use and need of palliative care services in Kansas. At KDHE, the Kansas Palliative Care Program, Kansas Comprehensive Cancer Prevention and Control (KS CCC) program, and Kansas Children with Special Health Care Needs Program are working in collaboration with the state-wide collaborators (e.g., Kansas Cancer Partnership) to increase awareness and provide palliative care training to health care workers. The program is continuing to achieve these goals through implementation of different strategies. These include providing continuing education to health care providers, conducting coordinated campaigns among medical students and providers and identifying and implementing strategies to increase palliative care training opportunities (e.g., End-of-life Nursing Education Consortium Training Program).

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Bureau of Epidemiology and Public Health Informatics & Bureau of Health Promotion

Preliminary Birth Report Issued

The Bureau of Epidemiology and Public Health Informatics has released *Preliminary Birth Report, Kansas, 2018*. As of April 1, 2019, KDHE's Office of Vital Statistics had recorded 36,247 births to Kansas resident mothers in 2018, a decrease of 0.6 percent from 36,464 births in 2017 (Table 1). The birth rate declined from 12.5 per 1,000 population in 2017 to 12.4 in 2018. This is the lowest birth rate for Kansas residents since the state created a centralized Vital Records system in 1911. Teen births declined from 5.6 percent of live births in 2017 to 5.3 percent in 2018; the count decreased slightly from 2,053 in 2017 to 1,933 in 2018. Final counts and rates may be slightly higher, due to Kansas residents births in other states. The report is at www.kdheks.gov/phi/download/Preliminary_Birth_Report_2018.pdf. For more information email: KDHE.HealthStatistics@ks.gov.

Bureau of Epidemiology and Public Health Informatics

Table 1.Preliminary Live Births and Rates by County of Residence, Kansas 2018								
County	**Total**	**Rate†**	**County**	**Total**	**Rate†**	**County**	**Total**	**Rate†**
Kansas	36,247	12.4	Hamilton	31	11.9	Pratt	116	12.4
Allen	159	12.8	Harper	69	12.5	Rawlins	37	14.8
Anderson	105	13.3	Harvey	386	11.3	Reno	642	10.3
Atchison	185	11.4	Haskell	67	16.8	Republic	44	9.4
Barber	55	12.3	Hodgeman	14	7.7	Rice	113	11.9
Barton	321	12.3	Jackson	170	12.8	Riley	895	12.1
Bourbon	202	13.8	Jefferson	188	9.9	Rooks	67	13.4
Brown	130	13.5	Jewell	24	8.4	Rush	23	7.4
Butler	701	10.5	Johnson	7,138	11.9	Russell	83	12.0
Chase	24	9.1	Kearny	65	16.5	Saline	642	11.8
Chautauqua	35	10.6	Kingman	68	9.3	Scott	67	13.7
Cherokee	231	11.5	Kiowa	41	16.3	Sedgwick	6,729	13.1
Cheyenne	21	7.9	Labette	269	13.5	Seward	381	17.5
Clark	24	12.0	Lane	19	12.2	Shawnee	2,122	12.0
Clay	90	11.3	Leavenworth	1,003	12.3	Sheridan	23	9.1
Cloud	104	11.9	Lincoln	30	9.9	Sherman	65	11.0
Coffey	73	8.9	Linn	102	10.5	Smith	30	8.3
Comanche	14	8.0	Logan	48	16.9	Stafford	44	10.5
Cowley	382	10.8	Lyon	405	12.1	Stanton	21	10.6
Crawford.	450	11.5	McPherson	301	10.5	Stevens	72	13.0
Decatur	30	10.4	Marion	111	9.3	Sumner	258	11.2
Dickinson	183	9.8	Marshall	117	12.0	Thomas	99	12.8
Doniphan	90	11.7	Meade	56	13.5	Trego	31	11.1
Douglas	1,114	9.2	Miami	369	11.0	Wabaunsee	72	10.4
Edwards	31	10.9	Mitchell	75	12.2	Wallace	33	22.0
Elk	24	9.6	Montgomery	359	11.2	Washington	77	14.2
Ellis	314	10.9	Morris	64	11.6	Wichita	22	10.5
Ellsworth	53	8.6	Morton	27	10.1	Wilson.	102	11.8
Finney	621	17.0	Nemaha	148	14.6	Woodson	24	7.5
Ford	574	16.9	Neosho	163	10.2	Wyandotte	2,615	15.8
Franklin	303	11.8	Ness	35	12.3	n.s.‡	5	n/a
Geary	936	28.7	Norton	56	10.3			
Gove	38	14.5	Osage	165	10.4	**Peer Group**		
Graham	24	9.6	Osborne	42	12.1	Frontier	1,216	11.4
Grant	126	17.2	Ottawa	60	10.3	Rural	2,677	11.7
Gray	78	12.9	Pawnee	51	7.8	Densely Settled Rural	5,945	12.8
Greeley	14	11.4	Phillips	61	11.5	Semi-Urban	5,683	12.5
Greenwood	54	8.9	Pottawatomie	383	15.8	Urban	20,721	12.5

* Based on 2018 births registered by April 1, 2019

† Rates are per 1,000 population.

‡ Some records without valid county data may be deleted from the final history file or may be assigned to a Kansas county based on other address information in the record.

Updates & Announcements

Kansas 2018 Population Estimates Issued

The estimated population of Kansas decreased 0.1 percent from 2017 to 2018, based on the original estimates. Census Bureau estimates show the state's population declined by 1,618 residents, from 2,913,123 in 2017 to 2,011,505 in 2018. The county with largest percentage increase was Pottawatomie, increasing by 1.5 percent to 24,277 residents in 2018. Geary and Osborne Counties had decreases of 3.7 percent, the former declining from 33,855 residents in 2017 to 32,594 in 2018, while the latter declined from 3,610 residents in 2017 to 3,475. Any changes are still largely due to the estimation process, as the Census Bureau continues to revise population estimates for previous years. At this point it appears that the population of Kansas decreased from one year to the next sometime since 2014, but successive estimates have located the decline in different years. Reports on population (and population-based rates) in the Annual Summary of Vital Statistics will always be based on the first estimates released by the Census Bureau ("original vintage"). See the full table of information on page 11.

Bureau of Epidemiology and Public Health Informatics

Table 1. Population Estimates and Change by County, Kansas 2017 and 2018

Geography	Population Estimate (as of July 1)		Change 2017 to 2018		Geography	Population Estimate (as of July 1)		Change 2017 to 2018	
	2017	2018	N	% [1]		2017	2018	N	% [1]
Kansas	2,913,123	2,911,505	-1,618	-0.1	Lincoln	3,043	3,023	-20	-0.7
Allen	12,519	12,444	-75	-0.6	Linn	9,726	9,750	24	0.2
Anderson	7,833	7,878	45	0.6	Logan	2,821	2,844	23	0.8
Atchison	16,332	16,193	-139	-0.9	Lyon	33,392	33,406	14	0.0
Barber	4,586	4,472	-114	-2.5	McPherson	28,708	28,537	-171	-0.6
Barton	26,476	26,111	-365	-1.4	Marion	11,986	11,950	-36	-0.3
Bourbon	14,754	14,653	-101	-0.7	Marshall	9,745	9,722	-23	-0.2
Brown	9,641	9,598	-43	-0.4	Meade	4,303	4,146	-157	-3.6
Butler	66,878	66,765	-113	-0.2	Miami	33,461	33,680	219	0.7
Chase	2,683	2,629	-54	-2.0	Mitchell	6,128	6,150	22	0.4
Chautauqua	3,363	3,309	-54	-1.6	Montgomery	32,556	32,120	-436	-1.3
Cherokee	20,115	20,015	-100	-0.5	Morris	5,455	5,521	66	1.2
Cheyenne	2,683	2,660	-23	-0.9	Morton	2,740	2,667	-73	-2.7
Clark	2,004	2,005	1	0.0	Nemaha	10,118	10,155	37	0.4
Clay	7,958	7,997	39	0.5	Neosho	16,015	15,951	-64	-0.4
Cloud	8,991	8,729	-262	-2.9	Ness	2,869	2,840	-29	-1.0
Coffey	8,224	8,233	9	0.1	Norton	5,441	5,430	-11	-0.2
Comanche	1,790	1,748	-42	-2.3	Osage	15,772	15,941	169	1.1
Cowley	35,361	35,218	-143	-0.4	Osborne	3,610	3,475	-135	-3.7
Crawford	39,034	39,019	-15	0.0	Ottawa	5,863	5,802	-61	-1.0

Table 1. Population Estimates and Change by County, Kansas 2017 and 2018 (Cont.)

Geography	Population Estimate (as of July 1)		Change 2017 to 2018		Geography	Population Estimate (as of July 1)		Change 2017 to 2018	
	2017	2018	N	% [1]		2017	2018	N	% [1]
Decatur	2,885	2,871	-14	-0.5	Pawnee	6,680	6,562	-118	-1.8
Dickinson	18,902	18,717	-185	-1.0	Phillips	5,370	5,317	-53	-1.0
Doniphan	7,727	7,682	-45	-0.6	Pottawatomie	23,908	24,277	369	1.5
Douglas	120,793	121,436	643	0.5	Pratt	9,547	9,378	-169	-1.8
Edwards	2,893	2,849	-44	-1.5	Rawlins	2,497	2,508	11	0.4
Elk	2,498	2,508	10	0.4	Reno	62,510	62,342	-168	-0.3
Ellis	28,689	28,710	21	0.1	Republic	4,691	4,664	-27	-0.6
Ellsworth	6,330	6,196	-134	-2.1	Rice	9,660	9,531	-129	-1.3
Finney	37,084	36,611	-473	-1.3	Riley	74,172	73,703	-469	-0.6
Ford	34,381	33,888	-493	-1.4	Rooks	5,043	5,013	-30	-0.6
Franklin	25,733	25,631	-102	-0.4	Rush	3,103	3,093	-10	-0.3
Geary	33,855	32,594	-1,261	-3.7	Russell	6,915	6,907	-8	-0.1
Gove	2,631	2,612	-19	-0.7	Saline	54,734	54,401	-333	-0.6
Graham	2,495	2,492	-3	-0.1	Scott	4,961	4,897	-64	-1.3
Grant	7,526	7,336	-190	-2.5	Sedgwick	513,687	513,607	-80	0.0
Gray	5,958	6,033	75	1.3	Seward	22,159	21,780	-379	-1.7
Greeley	1,249	1,227	-22	-1.8	Shawnee	178,187	177,499	-688	-0.4
Greenwood	6,123	6,055	-68	-1.1	Sheridan	2,527	2,533	6	0.2
Hamilton	2,640	2,607	-33	-1.3	Sherman	5,930	5,899	-31	-0.5
Harper	5,590	5,506	-84	-1.5	Smith	3,668	3,603	-65	-1.8
Harvey	34,544	34,210	-334	-1.0	Stafford	4,207	4,178	-29	-0.7
Haskell	4,053	3,997	-56	-1.4	Stanton	2,060	1,987	-73	-3.5
Hodgeman	1,842	1,818	-24	-1.3	Stevens	5,612	5,559	-53	-0.9
Jackson	13,318	13,280	-38	-0.3	Sumner	23,159	22,996	-163	-0.7
Jefferson	18,998	18,975	-23	-0.1	Thomas	7,788	7,711	-77	-1.0
Jewell	2,850	2,841	-9	-0.3	Trego	2,884	2,793	-91	-3.2
Johnson	591,178	597,555	6,377	1.1	Wabaunsee	6,874	6,899	25	0.4
Kearny	3,960	3,943	-17	-0.4	Wallace	1,524	1,503	-21	-1.4
Kingman	7,360	7,310	-50	-0.7	Washington	5,485	5,420	-65	-1.2
Kiowa	2,485	2,516	31	1.2	Wichita	2,125	2,105	-20	-0.9
Labette	20,145	19,964	-181	-0.9	Wilson	8,675	8,665	-10	-0.1
Lane	1,559	1,560	1	0.1	Woodson	3,147	3,183	36	1.1
Leavenworth	81,095	81,352	257	0.3	Wyandotte	165,288	165,324	36	0.0

1] Some values are zero due to rounding.

Note: The estimates are based on the 2010 Census and reflect changes to the April 1, 2010 population due to the Count Question Resolution program and geographic program revisions. All geographic boundaries for the 2018 population estimates series delineations are as of January 1, 2018.

Source: U.S. Census Bureau, American Factfinder, accessed April 22, 2018 from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk, on Estimates for 2017 are as originally released, ignoring later revisions.

Kansas Health Matters Updated

The Bureau of Epidemiology and Public Health Informatics has updated Kansas Health Matters (KHM) indicators, while its site hosting partner, Conduent, has added updated information and is enhancing the KHM maps

The following is a list of newly updated indicators on Kansas Health Matters staging website. The new measures include:

- Colorectal Cancer Rate
- Female Breast Cancer Rate
- Lung & Bronchus Cancer Rate
- Male Prostate Cancer Rate
- Percentage of Screened 3-12 Grade Students w/No Dental Sealants
- Percentage of Screened K-12 Grade Students w/Obvious Dental Decay

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The Public Health Informatics Unit (PHI) of the Kansas Department of Health and Environment's Bureau of Epidemiology and Public Health Informatics produces *Kansas Health Statistics Report* to inform the public about availability and uses of health data. Send comments, questions, address changes, and articles on health data intended for publication to: PHI, 1000 SW Jackson, Suite 130 Topeka, KS, 66612-1354, KDHE.HealthStatistics@ks.gov, or 785-296-1531. Dr. Lee A. Norman, Secretary KDHE; BEPHI; Elizabeth W. Saadi, PhD, State Registrar & Director, BEPHI; Farah Ahmed, PhD MPH, State Epidemiologist; Greg Crawford, BEPHI, Editor.